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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,168	07/28/2000	Jong-Chul Choi	Q60267	2947

7590 03/12/2004

Sughrue Mion Zinn Macpeak & Seas PLLC  
2100 Pennsylvania Avenue N W  
Washington, DC 20037-3202

EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

11

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/628,168

Applicant(s)

CHOI, JONG-CHUL

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okano (JP 04-1999123).

As to claims 1 and 8, Okano (fig. 1) shows a device for enhancing contrast for a liquid crystal display projection system, the contrast enhancing device comprising: an image driver (26) supplying an image signal (note the change of the variable resistor VR of the voltage regulating means 15); an LCD panel (14) for converting the input image signal into an optical image signal (see constitution). In addition, Okano teaches about a controller for lowering brightness of the LCD device (see constitution end portion).

Okano does not explicitly disclose a contrast control portion for controlling an amount of scanned light.

However, this is obvious. It would have been obvious to one skilled in the art at the time of the invention to consider using Okano's brightness controller because lowering the brightness would contribute to a change of contrast in the LCD display plate.

As to claim 8, the claim differs from claim 1 by the additional limitation "a polarizing plate for selectively transmitting the light scanned from said LCD". However, this limitation is disclosed by Okano (see polarizing plates 25a-b, fig. 1).

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3. Claims 2-3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okano in view of Helms (U.S. Pat. No. 5,952,992).

As to claims 2-3, Okano (fig. 1) shows a contrast enhancing device, wherein said contrast control portion comprises: a contrast control plate (25a) for controlling an amount of light scanned from said LCD panel

Okano does not explicitly disclose an ABL control signal for controlling the degree of the opening and closing of a contrast control plate.

However, in the same field of endeavor, Helms (fig. 2) shows an LCD brightness controller (212) for controlling the degree of the opening and closing of a contrast control plate.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to add the ABL control of Helms to the brightness control LCD 14 of Okano. Doing so would provide an automatic way to adjust the ambient lighting conditions of the display in which the display device is being used.

As to claims 5-6, Okano (fig. 1) discloses a contrast enhancing device, wherein said contrast control plate is an LCD, and wherein said contrast control plate controls the degree of the opening and closing cells constituting the LCD according to the contrast control signal applied from said contrast controller (see constitution).

As to claim 7, Okano does not teach about a "contrast control signal for controlling said contrast control plate to be closed or opened in correspondence to a difference value if the average level of the image signal is higher than the reference level"

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However, Helms (col. 4, lines 64 through col. 5 line 2) has weighted average compared to a Look-up table (reference level). See the motivation above.

*Allowable Subject Matter*

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)


**Or:**

(703)308-6606 for informal or draft communications, please label

"PROPOSED" or "DRAFT"


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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA. Sixth Floor (Receptionist).

  
F. Alphonse

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March 5, 2004

  
**STEVEN SARAS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**